

REMARKS

Claim 4 stands rejected under 35 U.S.C. § 112, second paragraph, and under prior art grounds. Applicants hereby add claims 5-11. Hence, claims 4-11 are all the claims pending in the application.

Preliminary Matters

Applicants thank the Examiner for acknowledging the claim for priority under 35 U.S.C. § 119 and receipt of the certified copy of the priority document. Applicants also thank the Examiner for initialing and returning the SB/08 Form submitted with the Information Disclosure Statement (IDS) filed March 29, 2006, thereby indicating that the references listed therein have been considered. The Examiner's acceptance of the drawings is further appreciated.

Claim Rejections - 35 U.S.C. § 112, second paragraph

The Examiner has rejected claim 4 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. Applicants amend claim 4 and submit that the claim complies with the requirements of 35 U.S.C. § 112, second paragraph.

Claim Rejections - 35 U.S.C. § 103(a)

The Examiner has rejected claim 4 under 35 U.S.C. § 103(a) as allegedly being unpatentable over JP Publication No. 11-027,949 to Matsui (hereinafter "Matsui"). Applicants respectfully traverse the rejections at least for the following reasons.

For example, claim 4 recites an electric power converter comprising a main circuit unit and a control unit. The main circuit unit comprises a first storage unit configured to store at least characteristics of the main circuit unit, calibration values of the plurality of detectors, and a

production history, an operation history, and specifications of the main circuit unit. The control unit comprises a second storage unit configured to prestore setup information, wherein the setup information includes a setting for driving the load, which includes an operating mode of the load or a setting for display. Claim 4 further recites that the control unit controls the switching element to reach a desired on or off state based on information concerning an operation of the load preset by the second storage unit and information provided by the plurality of detectors.

In the non-limiting exemplary embodiment of Fig. 3, a control unit 43 that performs easy open-loop control is mounted on a main circuit unit 41 having a certain capacity, for example, if the connection method of Fig. 2A is used. When the control unit 43 needs to be replaced by a control unit 42 that performs highly accurate closed-loop control, all that is required is to merely replace the control unit 43 that performs easy open-loop control with the control unit 42 that performs highly accurate closed-loop control. Specifically, because the main circuit unit 41 is provided with a first storage unit storing at least characteristics of the main circuit unit 41, calibration values of a plurality of detectors, a production history, an operation history, and specifications of the main circuit unit 41, there is no need to transfer such information from the control unit 43 to the main circuit 41, when these units are detached from one another.

Therefore, according to the non-limiting exemplary embodiment discussed above, there is no need to construct an electric power converter by combining a control unit having a control manner according to a particular purpose, such as a control unit that performs easy open-loop control or a control unit that performs highly accurate closed-loop control, with a main circuit unit having a capacity ranging from a small capacity of several watts to a large capacity of

several thousand kilowatts. Accordingly, there is no need to manufacture, store, and deliver such an electric power converter. Moreover, there is no need to temporarily upload information including the characteristics of the main circuit unit 41, the calibration values, the production history, the use history, lifetime information, etc., to another storage device and download these pieces of information to the newly provided control unit 42, and hence the change in function can be easily made.

In view of the foregoing, it becomes possible to combine an arbitrary main circuit unit with the control unit. As a result, the total stock of the electric power converters to be stored can be reduced to less than half. From the standpoint of a user, these features mean that upgrading can be easily performed. Accordingly, an electric power converter with excellent usability can be provided.

It will be appreciated that the foregoing remarks relate to the invention in a general sense. The remarks are not necessarily limitative of any claims and are intended only to help the Examiner better understand aspects of the claims.

Matsui is directed to an inverter device 1 including an inverter drive circuit 5 which receives a DC voltage from DC supply 2, converts the DC voltage into an AC voltage, and supplies the AC voltage to an electric motor 3. The inverter drive circuit 5 is controlled by an inverter control means 6 based on the value of two or more parameters. The two or more parameters are stored in a parameter storage means 8 and a group of the parameters is chosen based on an input from a selection switch 12. Additionally, a control device 4 may change the

values of the parameters stored in parameter storage means 8 which control the inverter drive circuit 5.

The Examiner alleges that Matsui's inverter device 1 corresponds to the claimed main circuit unit, Matsui's control device 4 corresponds to the claimed control unit, Matsui's inverter driver circuit 5 corresponds to the claimed switching unit, and Matsui's electric motor 3 corresponds to the claimed load.

However, Matsui does not teach or suggest that the control device 4 includes a storage unit. Instead, Matsui suggests that the control device 4 is merely an input device for altering the values of parameters stored in the storage means 8 of the main body (See at least paragraphs 5 and 24). Accordingly, Applicants submit that Matsui does not teach or suggest that the alleged control unit 4 comprises a second storage unit which prestores setup information, as recited by claim 4. Indeed, Matsui's storage means 8 and parameter initial value memory measure are included in the inverter device 1, rather than the external control device 4.

Likewise, because Matsui does not teach or suggest the claimed second storage unit, Matsui also fails to teach or suggest that the control unit controls the switching element to reach a desired on or off state based on information concerning an operation of the load preset by the second storage unit and information provided by the plurality of detectors, as recited by claim 4.

Moreover, Applicants submit that Matsui does not teach or suggest that the alleged main circuit unit 1 comprises a first storage unit configured to store at least characteristics of the main circuit unit, calibration values of the plurality of detectors, and a production history, an operation history, and specifications of the main circuit unit, as recited by claim 4. The Examiner does not

clearly indicate which features of Matsui allegedly correspond to the claimed first storage unit and the information stored therein. Instead, the Examiner generally refers to paragraphs 31-35 of Matsui to support that these features are taught.

The portion of Matsui cited by the Examiner is directed to parameters which are stored in parameter storage means 8. Accordingly, Applicants assume that the Examiner would allege that Matsui's storage means 8 corresponds to the claimed first storage unit. However, Matsui does not teach or suggest that the parameter's stored in the storage means 8 comprise calibration values with respect to the various detectors, a production history, an operation history, and specifications. Thus, Matsui does not teach or suggest the claimed first storage unit.

New Claims

New claims 5-11 have been added. Applicants submit that claims 5-10 are patentable by virtue of their dependency on claim 4 and because the cited art of record does not teach or suggest the features recited therein. Further, Applicants submit that independent claim 11 is patentable because the cited art of record does not teach or suggest the features recited therein.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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